Sometime the Anglo-Saxon language will be spoken throughout their land, and they will be educated and civilized, and no doubt *bettered,* by influences from the North. The tide of civilization is sweeping that way now, and in its van, with skilful hand and gentle, sympathetic touch, march the doctor and his aide-de-camp, the trained nurse.

The night wore on; we watched the shadows lengthen as the moon slipped down behind the hills, and at last, reluctantly, we tore ourselves away, to get some sleep before taking the early morning train back to Torreón.

AN EXPERIMENT IN CONTAGIOUS NURSING

By L. L. DOCK
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The older members of the nursing staff of the settlement in Henry Street have long been troubled by the question of contagion in the tenements. As a rule, contagious diseases are strictly banned by all district-nursing associations. Those having printed rules usually state that the nurses will not be sent to contagious cases. We, having no printed rules, and only such as are made by common assent, have always been rather more flexible in the matter of attending contagions than any other district nursing association that I know of, and have occasionally taken up some special case when the call was urgent.

The conditions of excessive crowding in our neighborhood make complete isolation of contagious cases so absolutely impossible that it often seemed more reprehensible to refuse some serious case than to disregard the principles of technique which, important as they are, are in practice almost grotesquely remote from the life about us. As we do not take obstetrical cases at all, it was usually possible to make some emergency arrangement.

In February last it so happened that one nurse's services could be given entirely to this class of cases, and we decided to make an experiment which we hoped might be a demonstration and, perhaps, lead to some thorough-going system of oversight for these cases, Miss Hitchcock and I having visions of the free dispensaries establishing a nursing service for contagions, but Miss Wald already discerning the possibility of municipal oversight through an extension of the functions of the Department of Health.

During past administrations, when bad politics ruled, the contagious hospitals of the city were dreadfully neglected—more so even

than other institutions, as they were less in the public eye. The Willard Parker Hospital, where the diphtheria cases were sent, was painfully inadequate in size, though the medical and nursing care was good. On North Brothers Island a good scarlet-fever pavilion was also absurdly small in bed space, and other wards were opened in decayed and broken-down shanties which a good, thrifty farmer would hardly have used for live-stock.

The city of London provides hospital accommodation for seventy-five per cent. of its contagious cases.

The city of New York, up to 1901, had bed space for seven per cent. These figures speak for themselves.

When Dr. Lederle, the present Health Commissioner, took charge, the better handling of contagions from all sides, both in the hospital and in the homes, was one of the many reformations to which he devoted himself. His work, beginning at the top, and ours, going on at the bottom, were not long in meeting, and the nursing care of contagions in the crowded tenement quarters soon proved itself to be but one part of the whole great problem of municipal sanitation, not to be dealt with in a sporadic way, but as part of an orderly and comprehensive plan.

In many ways these are the neediest cases a district nurse can find. For one thing, the mothers, always nerveless and weak-hearted when it is a question of applying treatment against the resistance of a child, are doubly ineffective when the orders call for treatment so distinctly repugnant as nasal irrigation, throat spraying, and the like. The child violently resists, and few mothers can even hold the hands still except under the sternest mandates. The nurse quickly finds that, with rare exceptions, such orders are never carried out except when she is present. Then the fear of bathing and of air, so deeply grounded in European medical teaching, as it would appear, is universal among our foreign people, and it is a most piteous sight to come into a small, stuffy, crowded room, with every window tightly closed, and find a child blazing with scarlet or measles, with inflamed eyes, occluded nostrils, and angry throat, pasty and sticky with the dirt of a week upon him, and dressed in full woollen clothing, shoes and stockings, and an enormous scarf or towel swathed around his poor little neck, with probably a slice of greasy bacon tied underneath. The bed is invariably filthy, for the parents are afraid to annoy him. The stereotyped answer of the mother when the nurse asks whether this or that has been done is, "He won't let me." But especially is it from the larger standpoint of the family and the neighborhood that contagions are most serious. For the protection of the school, quite rightly, the well children are all excluded

when there is a case of scarlet, measles, or diphtheria at home. It is then at once evident what a large proportion of school-time is thus lost by the children of the wage-earners of the great city when one adds up the ten days to two weeks of measles, the ten days to four weeks of diphtheria, and the six to eight weeks of scarlet during which the infection remains active.

Then right beside the guarding of the schools and loss of school-time to the well children, and in almost ludicrous contrast to it, goes on the crowded family life of the tenements, full of the most absurd details of "mixing-up" the sick and the well in one vast and hopeless jumble.

The father goes daily to his work, whatever it may be; the older boys and young women go to their shops and factories; the mother goes daily to the market, jostles her neighbors on the stairs, and stands in groups of adults and children with, as we have often seen, the infectious discharge from her child's nose or throat drying upon her apron; the friendly women of the same floor come in and sit about; icemen and other vendors come and go; the old Hebrew teacher brings his smudgy books and sits beside the sick child's bed to teach the others their lessons. Pillows and bedding are indiscriminately used; blankets and sheets are usually shaken from the windows and aired on the fire-escapes.

The supervision of the Department of Health is as complete and strict as is possible under the circumstances. Physicians are required to report all contagious cases immediately, and an officer placards the door with a large card stating the nature of the disease within and warning all against entrance. Leaflets in several languages are distributed giving the clearest and most explicit directions for domestic disinfection.

(Though these leaflets, among the Jews, are usually read, yet the conditions of the tenement are such that their directions are rarely followed, and I doubt if the Italians ever dream of paying any attention to them. They are usually found behind the looking-glass or placed as a mat under the medicine bottles.)

In all throat cases cultures are taken and antitoxin is furnished free, and is also administered by a physician from the Health Department in response to calls from any part of the city, and with wonderful celerity.

A medical inspector visits each contagious case once a week to watch progress and order disinfection, and this weekly visit is made with unfailing regularity.

When the case terminates, the rooms are disinfected, mattresses and

bedding will be steam sterilized without cost, and the landlord is directed to clean and paint.

Yet with all this care and detail, isolation in the tenements is little more than a farce. For instance, Mrs. Doolan will meet the nurse thus, "Oh, the doctor from the Board of Health was round, and Johnny was playing in the entry with the boys, and the doctor was awful mad" (Johnny being in the "peelingist" stage of scarlet!)

Compulsory hospital service seems a necessity so fundamental, where people are so closely crowded together, that without it inspection seems to a great extent a waste of time and trouble.

If the hospitals were adequate, and the people were taught to understand that contagious diseases from crowded houses had to be sent there, they would soon become accustomed to the idea, and familiarity with the beneficial results of the hospital, when patients were sent early, would soon become a matter of general knowledge. As it is, the patients are often sent too late, when the parents are desperate, or when the patients are really almost in a dying condition. This is unfair to the hospital, and gives it in many instances a reputation among the poor as a place to be dreaded, which it does not deserve.

A feature of the work that gave me much concern was the frequency of nephritic complication in scarlet. I should much like to compare the proportion with that of a hospital where the patients were taken in good time. Of course, to take the records from one where they went late in the illness would not be just the same. I felt certain that the nephritis I saw would not have occurred had the patients gone early to the hospital. The mothers feed the children too soon with solids, let them run about too soon, and do not give them enough fluid.

Since the use of antitoxin diphtheria has lost much of its terror, and is really less dreadful in the tenements than scarlet fever.

Measles seem often a simple disease, yet no full evidence is at hand to show how many children recuperate fully in strength after it.

A difficult thing to combat is the prevalent belief that all children must have contagions. "What's the use of that?" said one doubting father who was a very intelligent man otherwise; "all children must have these sicknesses."

"Why, no," said the nurse, "I have never had them."

"Well, you will have them," replied the parent in tones of conviction.

Three months of this service, interesting as it was, was gladly given up by the settlement when it was found that the Department of Health was prepared to take it up. Dr. Lederle, already planning for extended hospital buildings and compulsory hospital service when the

public health demanded it, established three nurses on the first of June to conduct a district nursing service for the contagious cases reported from the tenements of a definite manageable limit.

Mrs. Martha Peltier, a graduate of the New York City Hospital, took the diphtheria cases; Miss Katherine MacNamara, of Chicago, was put on the scarlet-fever cases, and Miss Katherine Healy, of the Kings County Hospital, Brooklyn, on the measles cases.

They came to us for a few days previously for initiation into the mysteries of streets, courts, and houses, and the preliminary supplies, and during June have reported every day at the settlement, their cases being telephoned down from the Health Department. They have used the bedside notes and daily records used in the settlement, and Miss Hitchcock, who has charge of all the nursing, has planned out with them their daily work, and has also assisted the department in arranging a very satisfactory mode of procedure for their technique in disinfection.

Dr. Lederle has now rented a small house next to the Willard Parker Hospital, and has cleansed it thoroughly and painted it throughout with enamel paint. The nurses live in their own quarters, but hereafter will come every morning to the little house in street dress. Here they change to their nursing uniform, and, returning in the late afternoon, again change all external clothing, including boots, wraps, and nursing-bags. These are all carried in suitable receptacles to the disinfecting plant of the hospital, where they are sterilized over night and returned early in the morning.

The nurses now get their supplies from the hospital and will no longer report at the settlement, but will continue the work as a distinct branch of the Department of Health.

Dr. Bryant, of the Willard Parker, has shown the greatest interest in the plan and has taken much pains to perfect the details relating to the coöperation of the hospital.

The nurses are all experts in contagious diseases, with full hospital training, and, accustomed to the rigid technique of the hospital, they were horrified beyond words at the conditions they found in the tenements. They are splendid women, full of enthusiasm, and their records will undoubtedly be a most valuable addition to the annals of municipal sanitation, and of much use to the Department of Health (the best in the country), whose badge they now have the honor of wearing.

A schedule of the cases of three months is appended, with descriptions of a few typical family conditions:

The family of L—— lived in a very old, dilapidated rear tenement containing ten apartments of two small rooms each. ("Rear tenement" means that the house stands on the back of the lot and is separated from the larger front house by about twelve or fifteen paces. In the little yard stands the row of horrible wooden privies, where all discharges must be carried, unless they are emptied into the sink.) Two families live on a floor, each having two rooms. The front one is sitting-room, kitchen, and laundry all in one, with an old couch or sofa where one person may sleep. The small room opening from it, with a little window at the back, is the bedroom, and holds one large bed with a pile of extra pillows. The L—— family consists of father, mother, and five young children. No water supply is in the rooms, but must be carried from the landing in the entry. Here two children had a severe scarlet fever, and while still ill two others came down with measles.

Mrs. D—— lived in a similar apartment in a house equally wretched and even dirtier. She had five children, three of whom came down at the same time with scarlet. Although the medical inspector advised hospital, she refused to let them go. However, as she was a widow and largely dependent on charitable aid, it was possible finally to compel her to send them.

The W—— family lived in a basement so far below the level of the street that it just did not quite come within the definition of a cellar. Their rooms were at the back, looking out upon a small court-yard, the level of which was almost to the top of their window. The living-room was dimly light and the two bedrooms almost entirely dark. No sun ever reached any of the three. A case of scarlet here, strange to say, did well and did not spread.

The Y—— family lived in three tiny roms, fairly light, with seven children. Of these three had measles, one had pneumonia, and one meningitis at the same time. The latter was sent to hospital, but the others remained at home, the parents, in the intervals of nursing, being engaged in selling white goods from a pushcart. The goods, which usually lay in the rooms at night, were kept downstairs while the children were ill, as the parents knew the Health Department would not allow them to be carried out of the room.

The K—— family were intelligent, and when two children came down with scarlet they sent them at once to the hospital. While the department fumigated, the family sat upon the stairs for want of other place to go. Here the nurse found them and discovered that another little boy had the scarlet rash full out and a temperature of 104. They

could not return to their rooms, so the ambulance was called and the patient carried off within half an hour.

Measles, 37 cases.

- Complicated with pneumonia, 8.
- Complicated with glandular abscess, 1.
- Simple uncomplicated cases, 28.

Diphtheria, 13 cases.

- True cases but mild, 4. No antitoxin given.
- Not considered true case, 1. As this case developed a typical septic rheumatism it was believed by the doctor in charge to be a true case, although the specific bacillus was not found.
- Had antitoxin, 8. All recovered.
  - No complications, 7.
  - Glandular abscess, 1.

Scarlet, 56 cases.

- Scarlet complicated with diphtheria, 5.
  - Had antitoxin, 3. Not enough, or too late; all died.
  - No antitoxin, 2.
    - Died, 1.
    - Recovered, 1.
- Simple scarlet with nephritis as sequel, 3. In these cases all symptoms were mild; nephritis came on in one to three weeks after fading of rash, and lasted from one to four weeks.
- Scarlet with severe exudate on tonsils and with nephritis also, 6.
  - Of these five had further complications as shown.
    - Inflammation of ear, 2.
    - Swollen glands, 2.
    - Pneumonia, 1.
- Scarlet with inflammation and suppuration of ears, 3.
- Scarlet with whooping-cough, 1.
- Scarlet with pneumonia, 1.
- Scarlet of mediocre character with violent recurrence two weeks after first attack; intense purpuric confluent rash, and throat greatly swollen but without exudate, no complications or sequelæ, 1. Recovery.
- Scarlet sent to hospital, 7. All did well.
- Simple scarlet with no complications, throats red and tender but no exudate, no sequelæ up to time of fumigation, 25.
- Violent scarlet with intense rash and severe symptoms,—swollen glands and badly swollen throats and tongues,—4. These cases all died in from one to seven days after the onset.